

Television Audience Measurement: Proposals of the Industry in the Era of Digitalization¹

Mesurament d'audiències de televisió: propostes de la indústria a l'era de la digitalització

Idoia Portilla

Universidad de Navarra

The arrival of digitalization has modified television consumption. Audiovisual content can still be enjoyed live via television sets but now we can also watch it on the screens of other devices such as computers, tablets or mobile phones. It can also be watched at the time the viewer prefers, being recorded in digital devices or accessed via the Internet. Thus, advertisers and broadcasters require audience data regardless of the type of screen or the time of consumption and the audience measurement industry needs to meet this requirement with new proposals.

In this paper, we comment on the main challenges faced by the traditional television audience measurement (TAM) systems due to digitalization. We review recent academic and professional contributions that show how television consumption is changing and how these changes affect audience measurement. Once the challenges are presented, we revise the requirements of the advertising market participants and how the

L'arribada de la digitalització ha modificat el consum de televisió. El contingut audiovisual encara es pot disfrutar en directe als televisors, però a més a més es pot veure en altres pantalles com ara ordinadors, tablettes o telèfons mòbils. També es pot escollir el moment del consum, gravant el contingut en aparells digitals o accedint-hi via internet. Davant d'aquest panorama, anunciants i canals requereixen dades d'audiència per a tot tipus de pantalles sigui quin sigui el moment de consum. I és la indústria del mesurament d'audiència qui ha de complir aquest requisit oferint noves propostes.

En aquest article, es comenten els principals reptes als quals s'enfronten els sistemes tradicionals de mesurament d'audiència de televisió (TAM) a causa de la digitalització. Es revisen contribucions acadèmiques i professionals que mostren com està canviant el consum de televisió i com afecten aquests canvis al mesurament d'audiències. Un cop presentades les restes, es revisen les



most important TAM companies are responding. Our purpose is to analyse the adequacy of the research industry proposals and try to summarise the main characteristics that the best audience measurement systems should offer in the new television consumption landscape.

Key words: audience measurement, television, digitalization, market.

exigències plantejades pels participants en el mercat publicitari i com hi estan responenent les empreses més importants de mesurament d'audiències de televisió (TAM). El nostre objectiu és analitzar l'adequació de les propostes de la indústria d'investigació de mercats i tractar de resumir les principals característiques que hauria d'oferir el millor sistema de mesurament d'audiències en aquest nou panorama de consum de televisió.

Paraules clau: mesurament d'audiències, televisió, digitalització, mercat.

Television audience data is used to answer many questions from broadcasters and advertisers in their daily work (Buzzard, 2012; Webster, 2014; Webster, Phalen and Lichty, 2014). Broadcasters need to know the audience in order to offer the best content in the most appropriate schedule so as to reach the most valuable audiences. Advertisers need to know the television audience and how to communicate with their actual and potential consumers. To answer all these questions, broadcasters and advertisers need a quantitative measurement of television audiences. This kind of audience research is also known in academia as 'ratings research' (Webster, 2014) and 'audience information systems' (Napoli, 2010).

Although this audience data can help in many media decisions, its main benefit is that it facilitates the buying and selling of advertising in commercial media markets (Buzzard, 2012; Napoli, 2010; Portilla, 2007; Webster, 2014). It sets prices so it serves as currency for the advertising market (Buzzard, 2012). Therefore, offering reliable audience data is fundamental for the commercial television market (Webster, Phalen and Lichty, 2014).

Television audience data has been provided by important research companies as syndicated research, as a 'standardized product that is sold to multiple subscribers' (Webster, 2014: 6). The system used is frequently based on people meters (Bourdon and Meadel, 2014). These devices record who is watching and what they are watching and offer both demographic and channel information (Buzzard, 2012; Webster, 2014).

However, the consumption of television is facing a new era with the arrival of digital technologies (Buzzard, 2012; Napoli, 2010). Nowadays, watching television content is not limited by time or platform. The audience has the power to

choose and even create content (O'Neill, Gallego and Zeller, 2014). At the same time, the technology to measure all these changes is also improving and more players are offering data about media audiences (Napoli, 2010). Thus, market research companies have to modify the way that traditional TAM has been carried out and offer adequate data for their clients' decision making.

In this paper, we will present the challenges faced by the TAM systems. We will review recent academic and professional contributions that show how television consumption is changing and how these changes affect audience measurement. The next step will be to revise some of the requirements of the participants in the advertising market and the answers given by the main market research companies to these changes. Our purpose is to analyse the adequacy of the research industry proposals and try to summarise the main characteristics that the most effective audience measurement system should be offering in the new landscape of television consumption.

THE CHALLENGES FOR THE AUDIENCE MEASUREMENT INDUSTRY IN THE NEW TELEVISION LANDSCAPE

The viewing of television content is changing, so the way that television audiences are measured must also change. In this section, three interconnected realities that affect traditional TAM are highlighted: the fragmentation of the audience by channels and screens, consumption without schedules (timeless consumption), and the activities of multitasking and multi-screening.

A fourth challenge faced by research companies relates to the research industry itself. New data is being generated and new players have appeared in the market which is having a clear effect on the companies in charge of the main TAM operations.

These four challenges have been observed by both academia and the professionals, so we will consider both sources in the literature review, paying special attention to the most recent contributions.

AUDIENCE FRAGMENTATION: MORE CHANNELS AND SCREENS

The arrival of digital terrestrial television throughout the world facilitated the appearance of more viewing channels. Big channels lost their high audiences and the number of niche channels with small audiences grew. This is a 'long-tail' scenario: the audience selects a few content options, 'followed by a long tail in which the remaining multitude of content options each attract very small audiences' (Napoli, 2012: 81).

This increasing number of channels and the arrival of new broadcasting systems have brought problems for audience measurement. The fragmentation has diminished the accuracy of ratings (Napoli, 2012). Additionally, in digital terrestrial television, the identification of a channel with traditional meters has become impossible (Buzeta and Moyano, 2013). Therefore, new meters are needed to measure digital television but without excluding analogue television.



Audience fragmentation has continued with the digitization of content and the increasing number of screens where audiovisual content can be viewed. There are multiple ways in which audiences can access the same content, and this situation affects audience measurement (Bermejo, 2009; Echegaray and Peñafiel, 2013; **Jenkins, 2004**; Taneja and Mamoria, 2012). Computers, tablet devices and smartphones have emerged as alternative screens (Council for Research Excellence, 2013; Diego, Guerrero and Etayo, 2014; Hassoun, 2014; Schneiderman, 2012). Some of these new screens are on portable devices permitting audience mobility (Council for Research Excellence, 2013). This has generated the new phenomenon of 'place shifting' (Buzzard, 2012).

TIMELESS CONSUMPTION

Digitalization allows us to view our favourite programmes at any time. This time-shift viewing has increased due to the growing penetration of recording devices and digital set-top boxes (STBs), but the increasing number of channels may also explain this trend (De Vos, 2010). The audience is no longer tied to schedules and the programme grid has diminished in importance as consumers adopt technologies (Council for Research Excellence, 2014b).

The traditional meters took into account the programme's hour of emission in order to measure the audience. But now, there is no time limit so meter technology must be improved. The media requires the measurement of two types of television consumption behaviours. The first is VOSDAL, 'Viewing On Same Day As Live'; this includes time-shift viewing that occurs on the same day as the original broadcast. The second behaviour is time-shift viewing, defined as the recording of programmes to be viewed in the 7 days after the original broadcast (not the same day).² Thus, TAM companies need to measure both these new behaviours.

MULTITASKING AND MULTI-SCREENING

Media consumption is multimedia and the audience practices multitasking (Consky, Henseler and Dawson, 2014; TNS, 2014). It is said that TV viewers are 'screen stacking - simultaneously carrying out other activities on other platforms' (Webb, 2014: 33).

It was assumed that increasing multi-screening could affect the attention given to TV programmes and commercials. However, there are several studies that indicate that multi-screening does not affect attention to advertising. Multi-screener stay in the room during commercial breaks (Goode and Mortensen, 2013; Phillips, 2013) and give ads at least as much attention as other people and are able to recall content to the same extent (Phillips, 2013). People have always multi-tasked whilst watching TV (having conversations, interacting with children and animals or reading magazines) and now they multi-task with media.

Consumers may utilise media simultaneously to engage in related content or to reinforce their engagement with the primary screen (Council for Research Excellence, 2014a; Hassoun, 2014). Television viewers browse the web or use so-

cial media to find information or talk about a TV programme. Until now, if the audience talked about TV programmes in their living rooms, these conversations remained in the private sphere. Now these conversations also occur on social media so we can listen to and see the level of engagement of the audience with each programme (Echegaray and Peñafiel, 2013; Kantar, 2014b).

Viewers follow their favourite series among the different media reinforcing their relationship with the media content and their sponsors (Jenkins, 2004), increasing engagement. So, instead of the traditional exposure measurement, engagement or affinity metrics are proposed as the new currencies in the audience marketplace (Hassoun, 2014). According to Napoli (2012: 86), audience behaviour now follows a multidimensional model from 'awareness' through different stages as 'interest', 'exposure', 'engagement' or 'recall'. And media industries can potentially monetize these new dimensions (Napoli, 2012). Thus, the market must reach an agreement about which metrics should be used and their definitions.

NEW DATA AND NEW PLAYERS

Digitalization has increased the volume of data. The total amount of digital data generated in 2013 has been estimated to be 3.5 zettabytes (Pimentel, 2014). It is the era of big data: high-volume, high-velocity and high-variety information assets.

Jensen (2014: 237) considered big data just as a 'complement and an addition to the multimethod toolbox of media and communication research'. But there is no doubt that it is transforming the research industry and, at the same time, represents a big opportunity for the market (Marks, 2013; Papí-Gálvez, 2014; Strong, 2013).

In the media research context, big data means data derived from distribution platforms and user databases, purchase or usage data derived from online behaviour or offline but registered through electronic devices, and social media data (Marks, 2013). In television, it involves using data from STBs, web servers, ISPs and cable or satellite platforms (Gunzerath, 2012; Marks, 2013). The advantage of this passive data is that is faster and cheaper to gather than personal interviews (Mareck, 2013).

Thus, media audience measurement could 'use multiple data sources together in a hybrid measurement approach' (Gunzerath, 2012: 102) in what are called big data projects (Marks, 2013). The fusion of datasets is also the proposal of the European Association of Television Sales Houses, rather than the replacement of traditional TAM by an entirely new solution (Egta, 2014). Hybrid combinations of panels with census data are needed to provide both volumetrics and demographics (CIMM, 2014).

Advertisers want data that links media use and purchasing behaviour (Taneja and Mamoria, 2012), and big data can provide it (Marks, 2013). Media owners also want this kind of data because they can use it to showcase their audiences to advertisers (Taneja and Mamoria, 2012).

Another interesting data is social media information that facilitates the measurement of engagement. According to Nielsen, 'more tweets equals more



viewers, and more viewers means more tweets' (Phillips, 2013) so this data can also be used to estimate audiences. However, it should be used carefully due to issues concerning ethics and the representativeness of samples (Bredl *et al.*, 2014) for example 'some channels over-perform on Twitter relative to audience share' (Kantar, 2014e). Nonetheless, the owners of social media data are increasing their relevance in the television market by becoming new data providers.

ANSWERS TO CHALLENGES

Advertisers, media and other participants in the advertising television market are asking for better data in this new media scenario. We will pay special attention to the requirements of associations of media, advertisers and sales houses and the contributions from the main companies with television meter panels, the predominant system of measuring television audiences.

To select the main companies, we will consider the ranking of the *Top 25 Global Research Organizations* published by Esomar (2014). Four international companies with television panels hold the top five positions. These are *Nielsen* (which includes *Arbitron*, acquired in October 2013) with headquarters in the US; *Kantar*, who have headquarters in the UK; *Ipsos*, originally from France, and *GfK*, based in Germany. In the following sections, we will present the most recent solutions that these four companies have provided in response to the challenges commented on earlier, in addition to the requirements made by important associations related to media and advertising.³

ANSWERS TO AUDIENCE FRAGMENTATION

The phenomenon of audience fragmentation has brought new meters, new measurement systems based on tracking the content, and the necessity for new standards and agreements about how to measure TV audiences.

A new generation of meters

The traditional people meters using *DFM* (*Direct Frequency Measurement*) were no longer valid for digital channels therefore research companies started to use meters based on matching techniques.

One new meter was the *PMS* or *Picture Matching System*. This kind of meter collects sample visual data from the images displayed on the TV screen. These images are matched against an array of signals from a central reference source.⁴ This was the system chosen by *TNS* (now *Kantar Media*) after the arrival of digital TV in Spain (Camps and Castán, 2006; Portilla, 2007). However, significant problems were experienced with this system such as a lack of identification due to overprints on TV programmes, or mistakes in channel identification when the same programme was broadcasted on different channels (Camps and Castán, 2006).

Tracking content: Audio Matching System

Another possibility is to track the audience by content. The *AMS* or *Audio Matching System* permits this identification of content and solves the problems presented by the *PMS*.

The *AMS* is based on audio data. The most recent systems assign an identifier (an audio watermark) to each content that is matched with the channels broadcasting in order to identify the content viewed.⁵

One example is the *UNITAM* meter from *AGB Nielsen Media Research* (Unitam, 2009). This meter uses a content identification technology called a *Content Tracking System* and permits the recognition of 'an unknown clip of audio material from virtually an unlimited number of reference clips, generated from known audio streams' (Unitam, 2009: 9). *GfK* has the *UMX* meter also based on content identification. Another example is the *RapidMeter* developed by *Kantar* (Kantar, 2012). In 2014 *Kantar Media* has reinforced this type of measurement with the acquisition of *Civolution's* audio watermarking unit (*Kantar Media*, 2014f).

Instead of people meters in homes, several companies have developed portable people meters (PPM) (Portilla, 2007). This is the case for *Ipsos's MediaCell* which is also based on capturing exposure to encoded audio signals. The advantage of this device over other PPM is that it does not require wearing an extra device, something that is not always easy for the panel members. It just requires uploading software into the smartphones of the participants. *Nielsen* is also testing using mobile/web apps to replace paper diaries for US local market television measurement (Shagrin and Link, 2013). The problem is that the audience figures generated by traditional meters and newer passive devices can vary, sometimes considerably (Green, 2011). And nobody wants to pay more if the system is not consistent with what was previously available in the market or if it fails to deliver larger audiences for all channels.

The standard for content identification and definition

As we have seen, audio matching is actually based on systems that assign identifiers to the content. The most interesting aspect is to obtain a cross-platform measurement, using watermarks with information as the screen where the content is displayed.

However, these content identifiers need to follow a common standard in order to be used by the market participants, implementing an open standard to identify video ads and content (CIMM, 2014). 'Currently, there is no open method for embedding persistent content identifiers (e.g., watermarks, fingerprints, etc.) into content, so that it survives, no matter how that content gets to the consumer' (Lennon, 2014: 3).

Another issue is to determine what 'TV content' is. The answer is not easy (Gabardo, 2012). It is necessary to determine if TV content only refers to professional content broadcasted by channels or if it also encompasses user-generated-content. According to *Egta* (2014) it would be interesting to include user-



generated-content and the advertising surrounding it, as far as possible, with professional content. Both points (definition of content and method for content identification) need the industry consensus.

The standard for metrics

A standard measurement system with recognized currency though platforms is necessary (CIMM, 2014; Edwards, 2012): a 'single currency and an Any Time, Any Where, Any Device (ATAWAD) measurement for all audiovisual content' (Egta, 2014: 4) is needed.

The *Making Measurement Make Sense* (3MS) and the *Media Rating Council* (MRC) are working towards introducing an *online Gross Ratings Point metric* for cross-platform comparability, with results expected in January 2015 (3MS, 2013). Nielsen also talks about cross-platform ratings (Solomon, 2014) and other metrics such as loyalty (Nielsen, 2014).

Cross-platform solutions for advertising are also necessary to help brands maximise the effectiveness of their cross-platform ad budgets. In the UK, for example, the Nielsen *Cross-Platform Campaign Ratings* can be used to take the commercial exposure from an advertiser's TV ads and online ads, and report on the combined audience for the campaign. For video, it proposes the measurement of 'viewability' (Feigenson, 2014).

However, most of the advertising players do not want new metrics, so there are also projects that try to use the existing well-known metrics for cross-platform audience analysis (Espn, 2013).

Again, it is essential to achieve consensus among participants in the media market. The system will not function if each media organisation tries to use their own metric as the currency for their operations in the advertising market.

Individuals or households

The focus of measurement must move from the media to the individual media user (Jensen, 2014), from service-centric (media-centric) to a holistic consumer-centric view (Marks, 2013).

The Egta (2014, 4) has requested a viewer-centric approach to obtain data about any screen in the same database 'rather than silos tailored to capture individual screens separately'. The WFA (2009) called for a person-centric approach so interactivity could be included. Nielsen also requires an individual measurement to provide deduplication across platforms (Solomon, 2014).

However, household measurement can also be necessary for purchasing data (CIMM, 2014) and for analysing viewing behaviour because, according to Harvey and Poltrack (2014), watching television with another person makes TV more effective. Once again, the media market players need to reach agreement about which metrics should be based on individual data and which ones on household data.



Answers to timeless consumption

As we have already commented, the increasing prevalence of timeless consumption has required the measurement of VOSDAL and time-shift viewing in addition to live TV consumption. The data from these two behaviours have been included in most audience panels as a result of audio matching (Evens and Berte, 2014).

The solution for timeless consumption measurement could also come from tracking content, including information about the emission in the watermark. This measurement could facilitate data of the type of content, platform and time of first emission.

Another possibility is the consideration of data obtained through the distribution system, a method that considers the transporting video signals for path measurement. There are two distinct methods: via the STBs of multichannel video programme distributors (MVPDs), or via Internet Protocol (IP) (Council for Research Excellence, 2012). The use of the information from the STBs has important advantages but also drawbacks that need further comment.

Set-top box (STB) or return-path data

The STB or 'return-path' data is one of the solutions suggested for the measurement of time-shift video consumption (Evens and Berte, 2014). The data would come through the so-called return-path or 'black channel', which permits sending information from the STB to the service provider (Media Rating Council, 2012).

This data could improve the quality of the data for the commercial broadcast/cable industry. Thus it is proposed to be included in combination with other audience data, as we will see in the next section. Another advantage of return-path data is that it is cheaper than meter panels.

However, it has several problems. The most significant one is the lack of viewer demographic data (Evens and Berte, 2014). Furthermore, maintenance of the technology would be the role of the media manager (Gunzerath, 2012: 104) not the researcher. This role implies that the media must pay for its maintenance, and that they must agree to collaborate and not to interfere with the data collection. Finally, there is great concern about data protection and anonymity. The subscriber should never be identified (Media Rating Council, 2012).

Answers to multitasking and multi-screening

New screens require new meters. Kantar have also developed a *VirtualMeter* to measure live, time-shift and on-demand consumption of TV content on PCs, laptops, tablets and handheld devices. Although it is called a meter, it is really software that captures minute-by-minute viewing. Its main advantage is that the data can be consolidated into standard ratings data.⁶ Kantar has also developed an app to measure weekly viewing data on mobiles in India where there is a significant amount of TV viewing on these devices (Mareck, 2014).



At this point, however, we are going to focus on the measurement of engagement due to increasing multitasking, because the media are developing many strategies in this direction.

There are several examples of measurement of engagement in the research and media market. For example, we find the *Emotional Bonding Q score*, a comparative indicator of the level of emotional involvement that audiences have with individual television programmes. The media-buying firm *Optimedia* launched its *Content Power Ratings* that involve the integration of various forms of audience exposure and engagement data from traditional Nielsen television ratings, *com-SCORE* online audience estimates, and data from social media data (Napoli, 2012: 87). Consequently, the measurement of engagement needs attention although there is no agreement about its definition (Napoli, 2010).

Moreover, engagement is not the most preferred metric for everyone. The Egta prefers to continue with the measurement of exposure and exposure to advertising as the 'major strength of television viewing on all platforms' (Egta, 2014: 8). Once again, the consensus of the industry is capital.

Answers to new data and new players

Before big data became a central issue, the media had tried to analyse great volumes of data from media, consumption and attitudes, for example. Some projects looked for a single source with all kinds of information collected from the same people, whilst other projects were based on data fusion (hybrid studies). All these projects are asked to integrate new data, so we are going to comment on both types: single-source and fusion projects.

Moreover, the new players are the owners of some of the new data required in the media market. So we will also comment on how traditional research companies are coping with the emergence of these new companies. We will make observations on the situation for the research sector where television audience research companies such as Nielsen, Kantar, Ipsos and Gfk have, for some time, played a special role.

Single source

There are several examples of single-source projects developed throughout the world. For example, in Australia, we find the *Roy Morgan Single Source*, a survey of over 50,000 respondents who are asked questions on lifestyle, attitudes and media consumption habits. The *TGI Survey* used in India is also a single-source project that gives data on media use, product purchase behaviour, lifestyle and attitudes (Taneja and Mamoria, 2012). In Spain, the study *AIMC Marcas* is also based on a survey, with around 10% of the sample interviewed online in 2013 (González and Santiago, 2013).

USA Touchpoints has moved from a hybrid study to a single-source survey using an iPhone App.⁷ It gathers information about location, activities, social setting, communication, media and emotions. One major problem could be the drop-off in respondent cooperation, although they say that this is very steady.



There have also been some projects that have not continued, such as the *Apollo Project*. The reasons are that they were very expensive and required consumers to do a number of tasks (Buzzard, 2012, 146-147). Furthermore, these studies derive their primary funding from large advertisers but are in fact more attractive for niche media outlets which cannot afford these expensive projects (Taneja and Mamoria, 2012).

Data fusion (hybrid studies)

An alternative to single-source data is the fusion of several data sources that could be considered as a kind of big data project. A key point of these hybrid studies is to integrate data from different sources, preferably based on passive data collection.

A very relevant example is the UK's *IPA Touchpoints*, delivered by Ipsos among other companies.⁸ Touchpoints integrates mono media currencies to create a multimedia audience information system that provides large samples (Taneja and Mamoria, 2012). Currently BARB (Broadcasters Audience Research Board)⁹ is working on *Project Dovetail*,¹⁰ to develop a hybrid model that combines data from the homes of members of the BARB meter panel with device-metric data (Mareck, 2014; Marks, 2014). This requires the fusion of data and BARB expects to be able to offer results in 2016.

Kantar has developed diverse data fusion projects. As we have seen before, the Virtual Meter data (with audience information from PCs, laptops, tablets and handheld devices) can be integrated with data from traditional TV audience data. It was tested in 2010-2011 in the Netherlands (De Vos, 2010: 19) and was introduced in Spain in February 2014 (Nafría, 2014). Kantar has also combined its data with STB data, to offer more information on digital campaigns (Kantar, 2014d). In the Netherlands, the next step is to offer data about multichannel video consumption, integrating information from a panel measuring all video viewing formats (PCs, laptops, tablets, mobiles, from browser or app, streamed or on demand) with census data for online TV, video and commercials (Mareck, 2014).

As we can see, these fusion projects complement rather than replace existing currencies (Taneja and Mamoria, 2012) because the price of commercials is set by traditional systems. Therefore, many of these hybrid studies use the approved standards of TV audience research with other devices, for example, in web-TV measurement (De Vos, 2010). The interest in using the TAM as a basis continues because it is the best known television currency (Egta, 2014). Moreover, the vast majority of big data sources measure devices not people, so data must be completed with survey data (Marks, 2013).

The main disadvantage of data fusion is that it is time consuming. However, if a proportion of the data comes from traditional measurement systems, the currencies will be available on time for the media market (Taneja and Mamoria, 2012).

New players and agreements

As we have seen before, digitalization brought social media and the possibility of talking about television content into the public sphere. These data began to be



of interest to broadcasters, and research companies are therefore trying to offer it as complementary to their audience data. The most important TAM companies have tried to look for partners and others have acquired companies and their know-how.

Kantar Media have acquired *The Data Republic*, a specialist social TV analytics agency (Kantar, 2014b) to improve their reports about social media. Additionally, Kantar has enhanced its global partnership with a five-year agreement with *Twitter*. Both parties have agreed to collaborate on new research products, and one of their areas of collaboration is media measurement (Kantar, 2014a).

Nielsen is also working with other companies to analyse online conversations. Its agreement with *Networked InsightsTM*, *Wiredset*, and *General Sentiment* enables obtaining indicators of the popularity and impact of content (Napoli, 2012).

CONCLUSIONS

Nowadays it is possible to watch TV content on multiple screens, without schedules and in a more active way. Thus, the traditional TAM methodologies need to adapt their procedures to this new scenario.

The first step should be the definition TV content. The players in the media market need to determine if it refers only to professional content broadcasted by channels or also to user-generated-content. If platforms are considered, it is necessary to determine if all of them need to be measured. The majority of viewing remains live and on traditional TV sets (Beeftink; 2014; Council for Research Excellence, 2014a; Diego, Guerrero and Etayo, 2014). Furthermore, new behaviours are bringing new metrics. The market players need to agree standards about all these points: definition of TV content, platforms to include and metrics to use. In all likelihood, both individual and household data is needed, but probably not for all metrics.

According to the methodology, one of most interesting and recent proposals is the measurement of TV audiences by content, using audio identifiers (watermarking) and audio matching. It solves the problems related to audience fragmentation and timeless consumption and could be used on several screens. However, an open standard is needed so all platforms generate identifiers in the same format.

The integration of data from different sources seems to be a very interesting procedure to measure cross-platform television audience. A monomethod strategy is inadequate to explain the complex media reality (Vicente-Mariño, 2014). Different companies measure different devices or contents, so the combination of their data is necessary to get the big picture of actual viewing behaviour. Several conditions are recommended for these hybrid studies:

1. Passive measurement (as passive as possible) is recommended (CIMM, 2014). It is not possible to get a lot of information for each person because the response rate declines sharply. Return-path data or applications

for smartphones could be an interesting option for collecting data to be integrated with other studies. Mobile technologies facilitate passive data collection, although the researcher must be transparent about the information collected (Baker, 2014) and follow research ethics codes of conduct such as ICC/ESOMAR (2007).

2. Survey data is necessary (Marks, 2013; Marks, 2014) to have demographic information and to work with representative samples, not only big numbers.
3. The methodology must be transparent and auditable (Egta, 2014) to be accepted by all parties. It is necessary to establish an acceptable currency with the agreement of all parties (Bourdon and Meadel, 2014).
4. The data must be provided at a reasonable cost and data collection should not take too long. Advertisers want more data but not higher costs, and time is very important (WFA, 2009) for decision making.

To reach consensus, it would be interesting to establish JIC (joint industry committees) institutions, instead of working with a unique company in a monopoly. This structure provides all categories of users sufficient levels of input and control (WFA, 2009). The agreement on definitions and methodology requires the participation of all the players in the TV market, and a JIC structure could ensure all voices are heard. Moreover, a monopoly has the defect of reducing the possibility of innovation (Buzzard, 2002).

In the development of this cross-media currency, scholars can play two important roles: as analysts and as qualitative researchers.

All the data available nowadays needs analysis. Desk research and secondary analysis seems to be increasing indicating a move away from data collection to analysis in the research market (Poynter, 2014). It is necessary to obtain more benefit from the data already available.

But in this world of big data, qualitative research is still necessary to explain behaviours or trends (August, 2014). For example, scholars can study the functions that the audience attribute to each media and how these functions are mutually interrelated, as with the study by Ballano, Uribe and Munté-Ramos (2014) about young users of digital media, or content types and trends, as undertaken by Rodríguez, Ortiz and Sáez (2014). The study of these functions can explain why the audience chooses one or another platform to consume content and when they choose each platform (Bjur *et al.*, 2014). Besides, television consumption and technology adoption can be different due to culture or social environment, for example. Academics are the ones who can analyse these issues in depth and make valuable contributions.

'Measuring the audience is something extremely important in understanding how media systems and individuals behave, but reaching beyond the figures should also be a common goal for any audience researcher' (Vicente-Mariño, 2014: 50-51). Finding the best data for better decisions should be the principal condition of any proposed research technique, and scholars can help to reach this objective.



Idoia Portilla (iportilla@unav.es) has a PhD in Economics and Business Administration from the Universidad de Navarra. She is lecturer in the Department of Media Management at the School of Communication of this University. She teaches Statistics, Marketing Research and Audience Research. Her areas of research are television and new media audience research,

ethics and methodology in new marketing research, and the effects of new media over traditional media. She is Chair of the Professional Standards Committee of AEDEMO (Asociación Española de Estudios de Mercado, Marketing y Opinión). She is also a member of ESOMAR (The World Association of Research Professionals for Market, Social and Opinion Research).

Notes

1 Some ideas included in this paper were shared at the *International Media Management Academic Association (IMMA) Annual Conference* celebrated at the University of Navarra (Pamplona, Spain) in October, 24th and 25th of 2014, but the paper has not been published in the proceedings or any other journal.

2 Definitions can be seen, for example, in <<http://www.barb.co.uk/resources/barb-facts/faq>>.

3 The associations are (in alphabetical order): 3Ms (measurementnow.net), BARB (www.barb.co.uk), CIMM (cimm-us.org), Council for Research Excellence (www.researchexcellence.com), Egta (www.egta.com), Media Rating Council (mediaratingcouncil.org) and WFA (www.wfanet.org).

4 See <<http://www.agbnielsen.com/glossary/glossary.asp>>.

5 It is also called an 'audio comparison method' and is explained, for example, in the Nielsen glossary available at <<http://www.agbnielsen.com/glossary/glossaryQ.asp#acm>>.

6 See <<http://www.kantarmedia-audiences.com/services/virtualmeter/>>.

7 See <<http://mediabehavior.com/how-it-works/gathering-the-data/>>.

8 See <<http://www.ipsos-mori.com/researchspecialisms/ipsosmediact/customresearch/Audience-Measurement.aspx>>.

9 Barb is the industry body responsible for TV audience measurement in UK.

10 <<http://www.barb.co.uk/whats-next?s=4>>.

References

3MS (2013). *Principles & Solutions*. Available at: <<http://measurementnow.net>> (10 September 2014).

August, S. (2014). "Big Data and the Future of Qualitative Research". *RWconnect.esomar.org*. 3/September. Available at: <<http://rwconnect.esomar.org>> (4 September 2014).

Baker, R. (2014). "Your Data, our Responsibilities". *Research World*. October, p. 17.

Ballano, S.; Uribe, A. and Munté-Ramos, R. (2014). "Young Users and the Digital Divide: Readers, Participants or Creators on Internet?" *Communication & Society* 27(4), p. 147-156.

BARB (2014). "BARB Panel to Capture Viewing on Tablets". *The Latest News and Insight*. 9 September. Available at: <<http://www.barb.co.uk>> (13 October 2014).

Bermejo, F. (2009). "Audience Manufacture in Historical Perspective: from Broadcasting to Google". *New Media & Society*, 11(1-2), p. 133-154.

Beefink, B. (2014). *What TouchPoints5 Tells us*. Presentation at the TouchPoints5 launch. Available at: <<http://www.ipa.co.uk>> (13 November 2014).

Bjur, J. [et al.]. (2014). "Cross-media use". In: Carpentier, N.; Schroder, K.C. and Hallet, L. (eds.). *Audience transformations. Shifting audience positions in late modernity*. New York: Routledge, p. 15-29.

Bourdon, J. and Meadel, C. (2014). "Deconstructing the Ratings Machine: An Introduction". In: Bourdon, J. and Meadel, C. (eds.). *Television Audiences across the World: Deconstructing the Ratings Machine*. Basingstoke: Palgrave Macmillan, p. 1-30.

Bredl, K. [et al.]. (2014). "Twitter and Social TV. Microblogging as a New Approach to Audience Research". In: Patriarche, G. [et al.] (eds.). *Audience Research Methodologies. Between innovation and consolidation*. New York: Routledge, p. 196-211.

Buzeta, C. and Moyano, P. (2013). "La medición de las audiencias de televisión en la era digital/The Television Audience Measurement in the Digital Age". *Cuadernos.info* (33), p. 53-62.

Buzzard, K. (2002). "The Peoplemeter Wars: A Case Study of Technological Innovation and Diffusion in the Ratings Industry". *Journal of Media Economics* (15), p. 273-291.

—. (2012). *Tracking the Audience. The Ratings Industry from Analog to digital*. New York: Routledge.

Camps, M. and Castán, M. (2006). "Retos de la medición de los canales temáticos, los pioneros de la digitalización de la televisión". *Investigación y Marketing*, 93, p. 32-36.

CIMM (2014). *CIMM's Seven Criteria for Solving Cross-Platform Measurement of Exposure to Ads and Content*. Available at: <<http://cimm-us.org>> (9 September 2014).

Consky, A.; Henseler, C. and Dawson, M. (2014). "Multi-Device, Multi-Purpose, One

Connected Consumer Uncovering the Value of Multiple Screens for Online Content and Advertising". Presentation at the conference *Digital Dimensions 2014 (Online + Big Data + Social Media + Mobile)* organized by Esomar. Stockholm. June.

Council for Research Excellence (2012). "Proliferation of Video-Consumption Devices Presents Dilemma for Audience Measurement". *News of the Council for Research Excellence*, December 19. Available at: <<http://www.researchexcellence.com>> (9 September 2014).

—. (2013). "The Smaller the Device, the Greater the Attention of the Mobile-TV Viewer, per New Study Findings". *News of the Council for Research Excellence*, July 24. Available at: <<http://www.researchexcellence.com>> (9 September 2014).

—. (2014a). "Nearly one in Five People Use Social Media Daily in Relation to TV Viewing, per Council for Research Excellence Study". *News of the Council for Research Excellence*, April 10. Available at: <<http://www.researchexcellence.com>> (9 September 2014).

—. (2014b). "Consumers Desire to Stream Video Content on TV Screens Will Drive Content Device Purchases, Council for Research Excellence Studies Suggest". *News of the Council for Research Excellence*, August 6. Available at: <<http://www.researchexcellence.com>> (9 September 2014).

De Vos, B. [et al.]. (2010). "Catching up with Web-TV. An Analysis of Non-Linear Viewing on the TV and the Internet. Presentation at WM3 conference organized by ESOMAR. October.

Diego, P.; Guerrero, E. and Etayo, C. (2014). "Televisión conectada en España: contenidos, pantallas y hábitos de visionado". *Revista Mediterránea de Comunicación: Mediterranean Journal of Communication*. 5(1), p. 179-199.

Echegaray, L. and Peñafiel, C. (2013). "La utilización de las redes sociales como nuevas herramientas aplicadas al análisis de audiencia". *Trípodos*, 33, p. 157-172.

Edwards, C. (2012). "Arbitron's Single Source Three-Screen Measurement Study". Presentation at the CMM-ANA-4A's-ARF Cross-Platform Video Measurement Summit. Available at: <<http://cimmusorg.startlogic.com>> (10 September 2014).

Egta (2014). *Egta Guidelines for the Future of Audiovisual Audience Measurement/The Television Sales Houses' Point of View*. May. Available at: <<http://www.egta.com>> (5 September 2014).

Esomar (2014). *Global Market Research 2014. An Esomar Industry Report in Cooperation with BDO Accountants and Advisors*. Amsterdam (The Netherlands): Esomar.

Espn (2013). "ESPN's 5-Platform Measurement Initiative with Arbitron and comScore". Presentation at the CMM 2nd Annual Cross-Platform Video Measurement Summit. Available at: <<http://cimmusorg.startlogic.com>> (11 September 2014).

Evens, T. and Berte, K. (2014). "Challenges of Digital Innovations: a Set-Top Box Based Approach". In: Bourdon, J. and Meadel, C. (eds.). *Television Audiences across the World: Deconstructing the Ratings Machine*. Basingstoke: Palgrave Macmillan, p. 234-247.

Feigenson, A. (2014). "NIELSEN Talk: Digital, the Newish Frontier, with Integral ad Science's David Hahn". *Nielsen Insights*. October, 22. Available at: <<http://www.nielsen.com>> (29 October 2014).

Gabardo, J.A. (2012). "¿Estamos midiendo todo el consumo de televisión?" *Revista Anuncios* (1441). Available at: <<http://www.aimc.es>> (12 September 2014).

Gfk (2014). *Annual report 2013*. Gfk. Available at: <<http://www.gfk.com>> (11 September 2014).

Goode, A. and Mortensen, N. (2013). "Multi-Screen Viewing Behaviour". *Admap* (November), p. 14-17.

González, I. and Santiago, F. (2013). "Aimc Marcas Online Test". Presentation at the EMRO conference. June, Bucarest. Available at: <<http://www.aimc.es>> (12 September 2014).

Green, A. (2011). "Understanding Television Audiences". *Warc Best Practice*. September. Available at: <<http://www.ipsos.com>> (5 September 2014).

Gunzerath, D. (2012). "Current Trends in U.S. Media Measurement Methods". *The International Journal of Media Management*. (14), p. 99-106.

Harvey, B. and Poltrack, D. (2014). "Besides, Monetizing Holistic Viewer Insight". Presentation in the *Audience Measurement 2014* organized by the ARF. Video available at: <<https://www.youtube.com>> (10 September 2014).

Hassoun, D. (2014). "Tracking Attention: toward an Analysis of Simultaneous Media Use". *Television & New Media*, 15(4), p. 271-288.

ICC/ESOMAR (2007). *The ICC/ESOMAR Code on Market and Social Research*. Available at: <www.esomar.org> (24 November 2014).

Jensen, K.B. (2014). "Audiences, Audiences Everywhere-Measured, Interpreted and Imagined". In: Patriarche, G. et al. (eds.). *Audience Research Methodologies. Between Innovation and Consolidation*. New York: Routledge, p. 227-239.

Kantar Media (2012). "RapidMeter: A Simple Innovation Bringing Audience Measurement to New Markets". *Kantar News and Views*. 11 July. Available at: <<http://www.kantarmedia-audiences.com>> (5 September 2014).

—. (2014a). "Kantar and Twitter Extend their Worldwide Strategic Alliance". *Kantar News and Views*. 1 March. Available at: <<http://kantarmedia-audiences.com>> (5 September 2014).

—. (2014b). "Kantar Media Acquires Social TV Analytics Specialists The Data Republic". *Kantar News and Views*. 2 April. Available at: <<http://www.kantarmedia-audiences.com>> (5 September 2014).

—. (2014c). "Why do we need to understand the engagement level of consumers through social data". *Kantar News and Views*. 26 August. Available at: <<http://kantarmedia-audiences.com>> (5 September 2014).

—. (2014d). "Set Top Box Data Enhances Precision of Desktop Campaigns". *Kantar Media US Press Room*. 11 September. Available at: <<http://www.kantarmedia.us>> (12 September 2014).

—. (2014e). "Kantar Media Study Confirms Link between Twitter Activity and TV Viewing in the UK". *Kantar Media US Press Room*, 24 September. Available at: <<http://kantarmedia-audiences.com>> (24 September 2014).

—. (2014f). "Kantar Media to Acquire Audio Watermarking Unit of Civolution". *Kantar News and Views*. 16 October. Available at: <<http://www.kantarmedia.com>> (27 October 2014).

Lennon, C. (2014). "Binding IDs to Content A Progress Report". *CMM 3rd Annual Cross-Platform Video Measurement Summit*. April. <<http://cimm-us.org>> (5 September 2014).

Mareck, M. (2013). "Can Big Data Replace Industry Currencies?" *Research World*. September, p. 75.

—. (2014). "Wanted: Mobile Audiences". *Research World*. October, p. 43.

Marks, R. (2013). *The Big Opportunity: Audience Research Meets Big Data. Report for the IPA*. Available at: <<http://www.rajar.co.uk>> (11 November 2014).

—. (2014). The Future of Data/Information. Presentation at the TouchPoints5 launch. Available at: <<http://www.ipa.co.uk>> (13 November 2014).

Media Rating Council (2012). *Multi Channel Digital Video Data Capture, Accumulation and Processing Guidelines*. Available at: <<http://mediaratingcouncil.org>> (11 September 2014).

Nafria, E. (2014). "Del TAM al VAM". Presentation at the 30th Seminario TV 2014 organized by AEDEMO. February.

Napoli, P.M. (2010). *Audience evolution: New technologies and the transformation of the media audiences*. New York: Columbia University Press.

—. (2012). "Audience Evolution and the Future of Audience Research". *The International Journal of Media Management*, 14, p. 79-97.

Nielsen (2014). "Nielsen TV: Loyal TV Viewers Are the Desirable Viewers". *Nielsen In-*

sights. October, 6. Available at: <<http://www.nielsen.com>> (27 October 2014).

O'Neill, B.; Gallego J.I. and Zeller, F. (2014). "New Perspectives on Audience Activity. 'Prosumption' and Media Activism as Audience Practices". In: Carpentier, N., Schroder, K.C. and Hallet, L. (eds.). *Audience Transformations. Shifting Audience Positions in Late Modernity*. New York: Routledge, p. 157-171.

Papí-Galvez, N. (2014). "Los medios online y la crisis? de la planificación de medios publicitarios". In: *adComunica. Revista Científica de Estrategias, Tendencias e Innovación en Comunicación* (7), p. 29-48.

Phillips, T. (2013). "What Are You Looking at?" *Research-live.com*. 16 December. Available at: <<http://www.research-live.com>> (4 September 2014).

Pimentel, A. (2014). "Stuffed: Why Data Storage Is Hot Again. (Really!)". *Recode.net*. 10 January. Available at: <<http://recode.net>> (4 September 2014).

Portilla, I. (2007). "La medición de audiencias en televisión". In: CIEC, *La televisión en España. Informe 2007*. Barcelona: Ediciones Deusto, p. 269-283.

Poynter, R. (2014). "ESOMAR Report Confirms That Surveys Are in Decline". Blog #NewMR. September 3. Available at: <<http://newmr.org>> (10 September 2014).

Rodríguez, R.; Ortiz, F. and Sáez, V. (2014). "Transmedia Contents Created around Spanish Television Series in 2013: Typology, Analysis, Overview and Trends". *Communication & Society*, 27(4), p. 73-96.

Schneiderman, S. (2012). "Tapping into Tabletomics: A Tablet Research Exploration". *Viacom.blog*, April 17. Available at: <<http://blog.viacom.com>> (9 September 2014).

Shagrin, C. and Link, M. (2013). "Reinventing TV Diary Measurement - Update from CMM-Nielsen Innovation Committee". Presentation at the CMM 2nd Annual Cross-Platform Video Measurement Summit. Available at: <<http://cimmusorg.startlogic.com>> (11 September 2014).



Solomon, E. (2014). "Nielsen's Roadmap for Cross-Platform Ratings". Presentation at CIMM 3rd Annual Cross-Platform Video Measurement Summit. Available at: <<http://cimm-us.org>> (9 September 2014).

Strong, C. (2013). "Beyond Big Data. How Big Data Needs Consumer insight in Order to Realise its Full Potential". Presentation at the *3D Digital Dimensions*, organized by Esomar. June, Boston. Abstract available at: <<http://www.esomar.org>> (8 September 2014).

Taneja, H. and Mamoria, U. (2012). "Measuring Media Use across Platforms: Evolving Audience Information Systems". *The International Journal of Media Management*, 14, p. 121-140.

TNS (2014). "TV Strikes Back: Rise of Digital Devices Drives New Viewing Habits". *TNS Press Releases and News Articles*. 10 July. Available at: <<http://www.tnsglobal.com>> (5 September 2014).

Unitam (2009). *Unitam Technology*. UNITAM for Sweeden. Available at: <www.mms.se> (11 September 2014).

Vicente-Mariño, M. (2014). "Audience Research Methods. Facing the Challenges of Transforming Audiences". In: Patriarche, G. et al. (eds.). *Audience Research Methodologies. Between innovation and consolidation*. New York: Routledge, p. 37-53.

Webb, J. (2014). "With New Channels Come New Opportunities". *Research World*. October, p. 32-33.

Webster, J.G. (2014). *The Marketplace of Attention: How Audiences Take Shape in a Digital Age*. Cambridge, MA: MIT Press.

Webster, J.G.; Phalen, P.F and Lichty, L.W. (2014). *Ratings Analysis: Audience Measurement and Analytics*. New York: Routledge.

WFA (2009). *What Advertisers Want from online Audience Measurement*. WFA Position Paper. April. Available at: <<http://www.wfanet.org>> (5 September 2014).